



NASA STTR 2010 Phase I Solicitation

T8.03 Innovative Green Technologies for Renewable Energy Sources

Lead Center: LaRC

NASA is interested in advancing green technology research for achieving sustainable and environmental friendly energy sources for terrestrial and space applications. Dependence on fossil fuels has to be balanced with other potential sources of energy for minimizing deleterious effects of their byproducts. In the case of Lunar, Mars and other planetary explorations including development of human habitats, use of clean and renewable energy sources would help advance mission objectives to a greater extent besides reducing waste products.

Proposals are sought to develop innovative renewable sources of energy that generate minimal emissions, environmentally safe and are sustainable over extended periods of time. Proposed technologies should advance the state-of-the art systems and/or components by focusing on techniques that either reduce or replace the use of fossil fuels in a cost effective manner.

Clean energy source technologies and methodologies including but are not limited to those based on solar, wind, hydro, biomass, geothermal, and atmospheric constituents such as hydrogen, carbon dioxide are solicited. Innovative space based solar power generation and effective transport to benefit terrestrial and space applications are desired. Proposals related to efficient operation over wide temperature ranges under harsh environmental conditions are also sought. Energy sources that enable future missions which otherwise would be difficult with conventional resources are desired.